Dell Vostro 3460
Owner's Manual

Regulatory Model: P34G
Regulatory Type: P34G001

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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1

Working on Your Computer

Before Working Inside Your Computer

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that the following conditions exist:

- You have performed the steps in Working on Your Computer.
- You have read the safety information that shipped with your computer.
- A component can be replaced or--if purchased separately--installed by performing the removal procedure in reverse order.

WARNING: Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance

CAUTION: Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

CAUTION: To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface, such as a connector on the back of the computer.

CAUTION: Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

CAUTION: When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

NOTE: The color of your computer and certain components may appear differently than shown in this document.

To avoid damaging your computer, perform the following steps before you begin working inside the computer.

1. Ensure that your work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see Turning Off Your Computer).
3. If the computer is connected to a docking device (docked) such as the optional Media Base or Battery Slice, undock it.

   CAUTION: To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.
4. Disconnect all network cables from the computer.
5. Disconnect your computer and all attached devices from their electrical outlets.

6. Close the display and turn the computer upside-down on a flat work surface.

   NOTE: To avoid damaging the system board, you must remove the main battery before you service the computer.

7. Remove the main battery.
8. Turn the computer top-side up.
9. Open the display.
10. Press the power button to ground the system board.

    CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the display.

    CAUTION: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate static electricity, which could harm internal components.

11. Remove any installed ExpressCards or Smart Cards from the appropriate slots.

Turning Off Your Computer

CAUTION: To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Shut down the operating system:
   - In Windows 7:

     Click **Start** , then click **Shut Down**.
   - In Windows Vista :

     Click **Start** , then click the arrow in the lower-right corner of the **Start** menu as shown below, and then click **Shut Down**.

   - In Windows XP:

     Click **Start** → **Turn Off Computer** → **Turn Off** . The computer turns off after the operating system shutdown process is complete.
2. Ensure that the computer and all attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for about 4 seconds to turn them off.

After Working Inside Your Computer

After you complete any replacement procedure, ensure you connect any external devices, cards, and cables before turning on your computer.

CAUTION: To avoid damage to the computer, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

1. Connect any external devices, such as a port replicator, battery slice, or media base, and replace any cards, such as an ExpressCard.
2. Connect any telephone or network cables to your computer.

CAUTION: To connect a network cable, first plug the cable into the network device and then plug it into the computer.

3. Replace the battery.
4. Connect your computer and all attached devices to their electrical outlets.
5. Turn on your computer.

2

Removing and Installing Components

This section provides detailed information on how to remove or install the components from your computer.

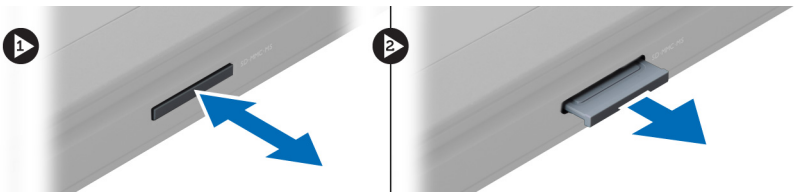
Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- Phillips screwdriver
- Small plastic scribe

Removing the Security Digital (SD) Card

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Press in on the SD card to release it from the computer. Slide the SD card out of the computer.



Installing the Secure Digital Card

1. Push the SD card into the slot until it clicks into place.
2. Follow the procedures in *After Working Inside Your Computer*.

Removing the Battery

1. Follow the procedures in *Before Working On Your Computer*.
2. Slide the battery latches to release the battery.

3. Lift and remove the battery from the computer.

Installing the Battery

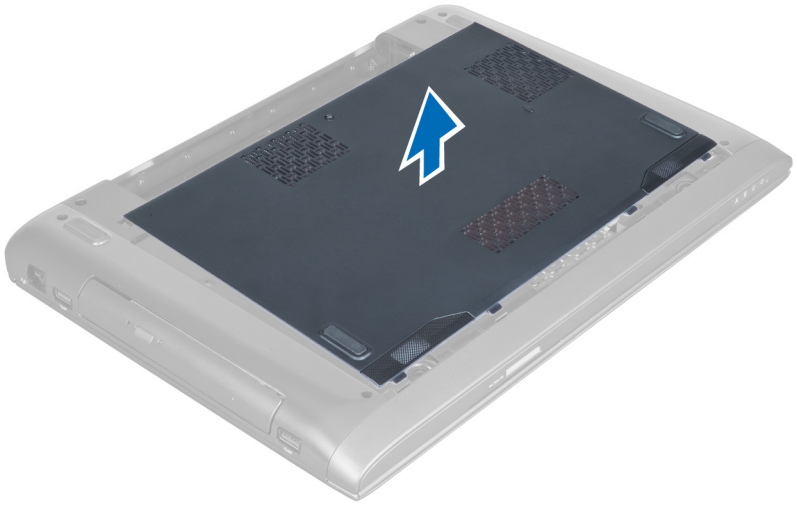
1. Slide the battery into its slot until it clicks into place.
2. Follow the procedures in *After Working Inside Your Computer.*

Removing the Base Cover

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the battery.
3. Remove the screw(s) that secures the cover to the computer. Lift the cover upwards.

4. Slide the cover outwards to release it from the notches on the computer.

5. Lift the cover upwards and away from the computer.

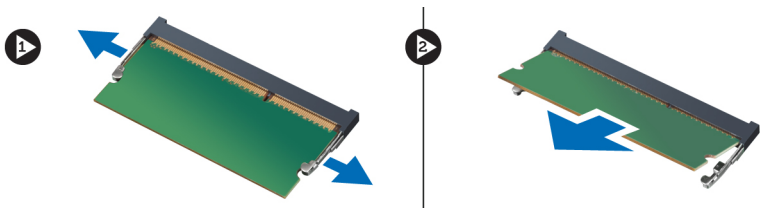


Installing the Base Cover

1. Align the edge of the base cover on the computer and slide it on the computer.
2. Tighten the screw(s) to secure the base cover to the computer.
3. Install the battery.
4. Follow the procedures in *After Working Inside Your Computer.*

Removing the Memory

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
3. Pry the retention clips away from the memory module until it pops-up. Lift and remove the memory module from its connector.



Installing the Memory

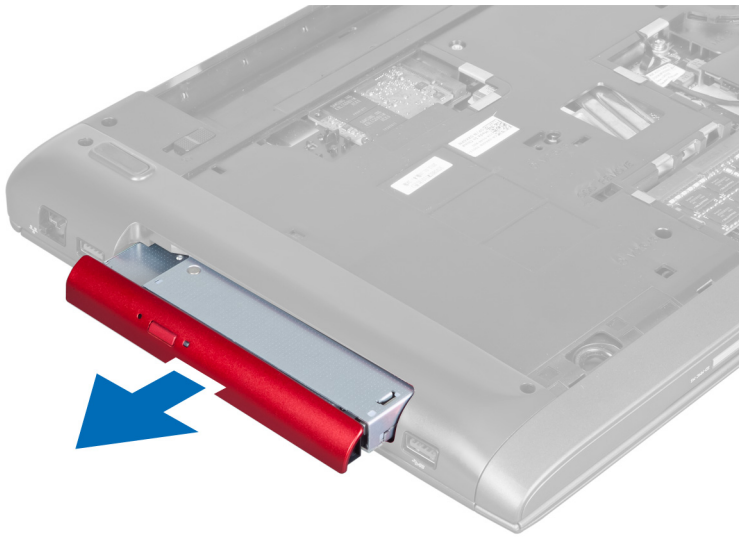
1. Insert and secure the memory module to the system board.
2. Install the:
   a) base cover
   b) battery
3. Follow the procedures in *After Working Inside Your Computer*.

Removing the Optical Drive

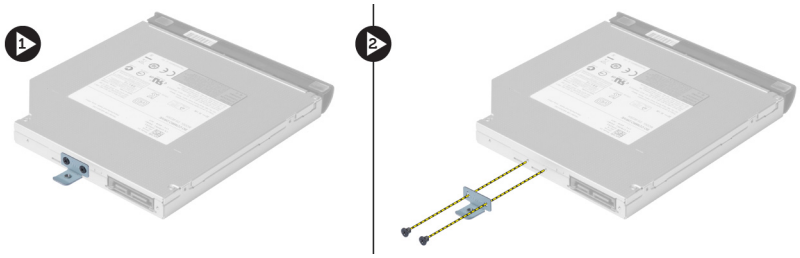
1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
3. Remove the screw that secures the optical drive to the computer.

4. Use a flat-headed screw driver to pry the optical drive out of the computer.

5. Slide the optical drive outwards and remove it from the computer.



6. Remove the screws that secure the optical-drive bracket. Remove the optical-drive bracket from the optical drive.

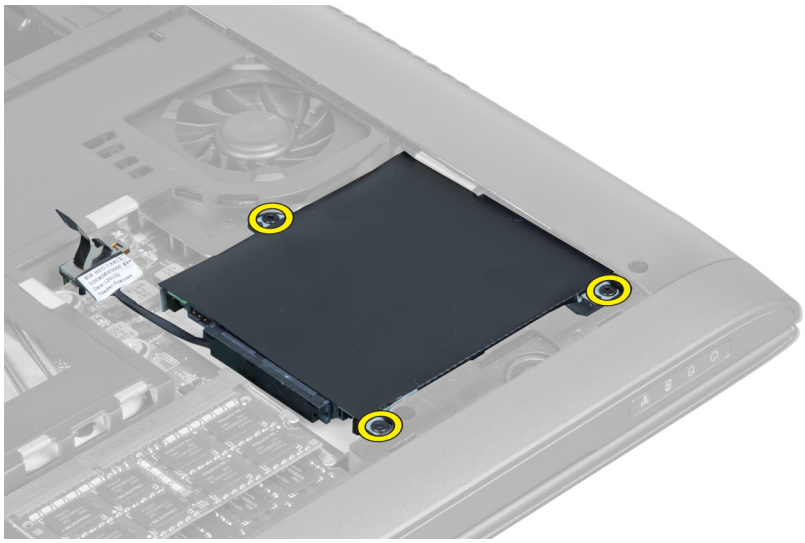


Installing the Optical Drive

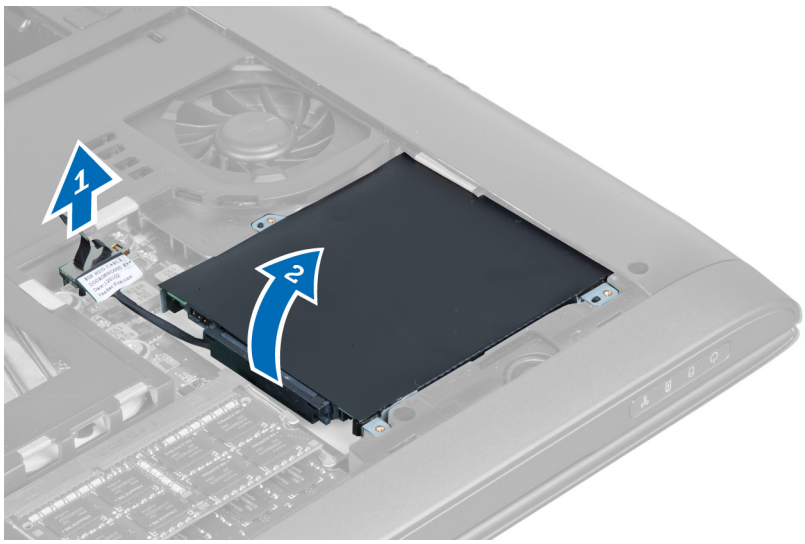
1. Replace the optical-drive bracket and tighten the screws that secure the optical drive to the optical-drive bracket.
2. Slide the optical drive into the compartment on the chassis.
3. Tighten the screw to secure the optical drive to the computer.
4. Install the:
   a) base cover
   b) battery
5. Follow the procedures in *After Working Inside Your Computer.*

Removing the Hard Drive

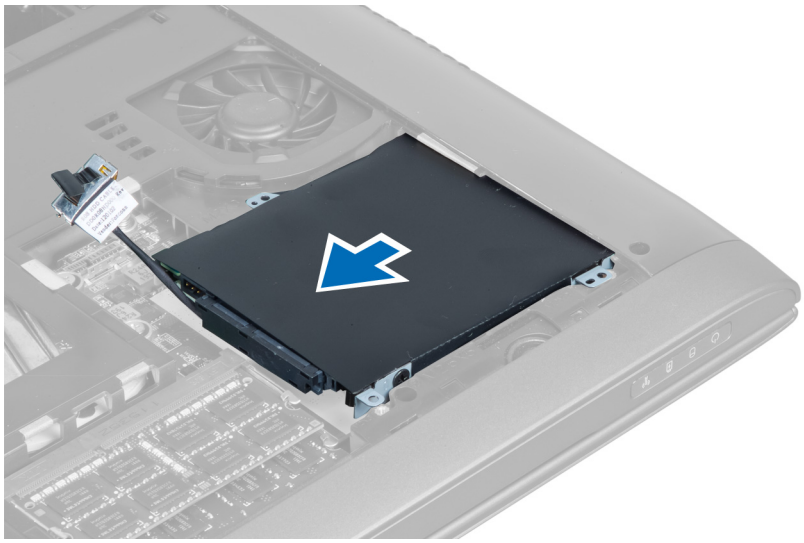
1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
3. Remove the screws that secure the hard drive to the computer.



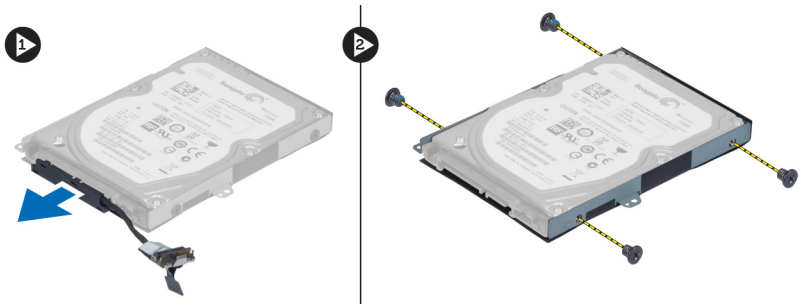
4. Lift the tab to disconnect the hard-drive cable from the system board. Lift the hard drive to loosen it from the chassis.



5. Slide and remove the hard drive from the computer.



6. Disconnect the hard-drive cable. Remove the screws securing the hard drive to hard-drive bracket. Lift the hard drive from the bracket.

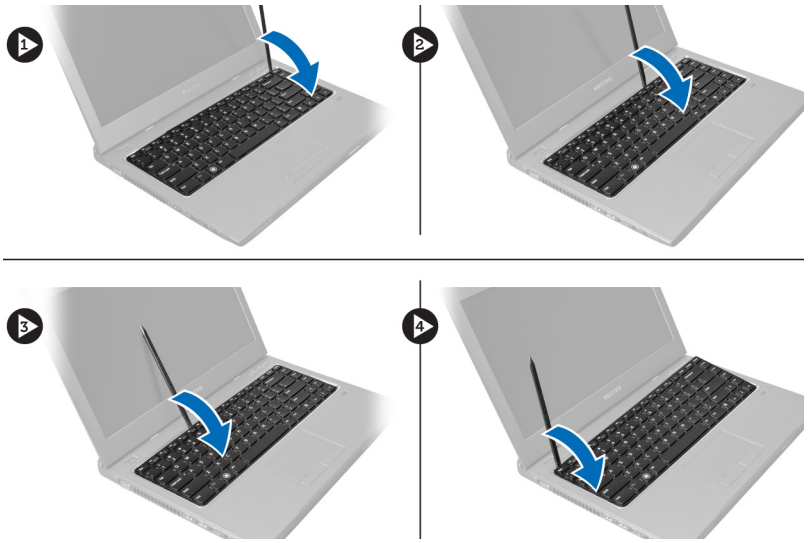


Installing the Hard Drive

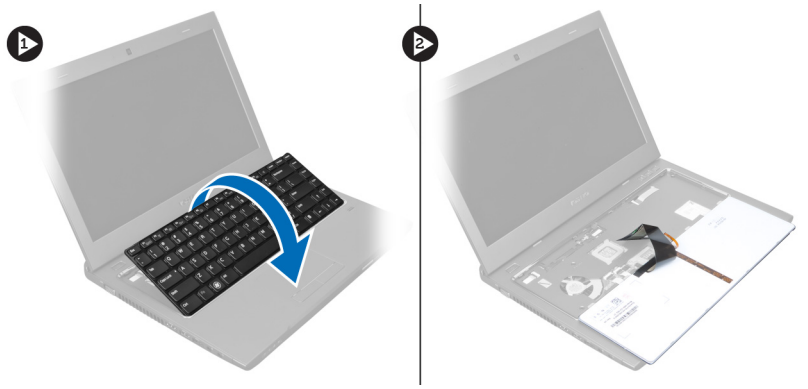
1. Place the hard drive into the hard-drive bracket.
2. Tighten the screws that secures the hard-drive bracket to the hard drive.
3. Connect the hard-drive cable to the hard drive.
4. Place the hard drive on the computer.
5. Connect the hard drive cable to the connector on the system board.
6. Tighten the screws to secure the hard drive to the computer.
7. Install the:
   a) base cover
   b) battery
8. Follow the procedures in *After Working Inside Your Computer*.

Removing the Keyboard

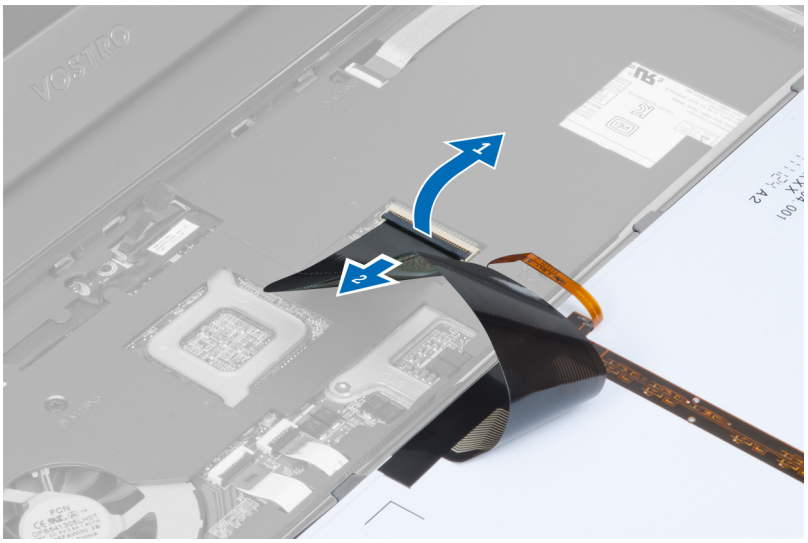
1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the battery.
3. Pry the keyboard upwards with the use of a flat-head screwdriver in the notches along the top of the keyboard.



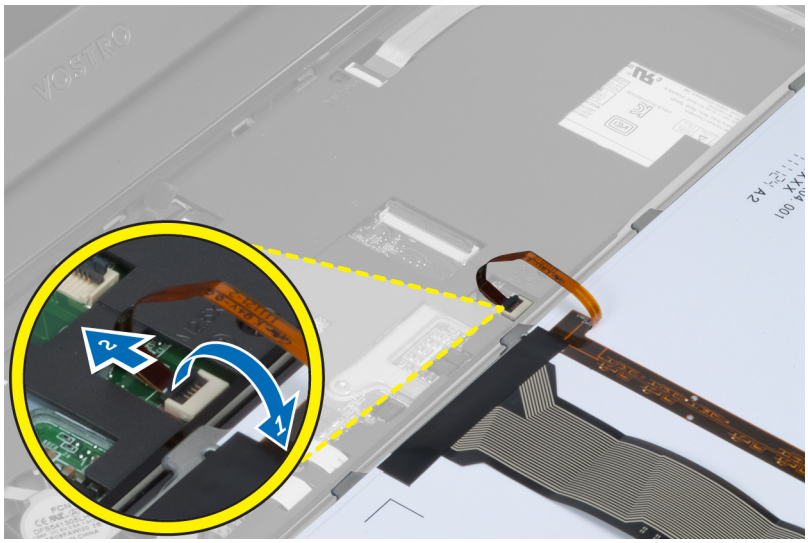
4. Lift and flip the keyboard from the computer.



5. Release the latch on the system board connector, then disconnect the mylar tape from the connector.



6. Release the latch and disconnect the connector, then disconnect the keyboard data cable.



Installing the Keyboard

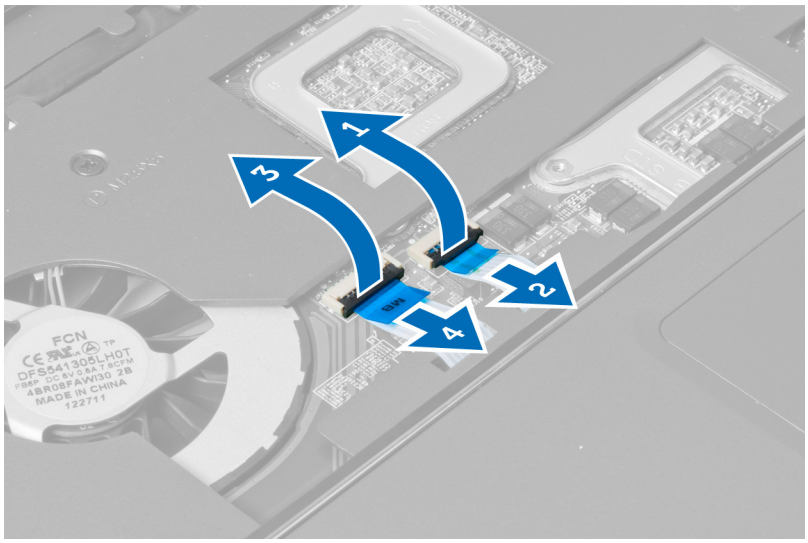
1. Connect the keyboard data cable to the system board.
2. Connect the mylar tape to the system board.
3. Insert the keyboard in its compartment.
4. Press down until the keyboard clicks into place.
5. Install the battery.
6. Follow the procedures in *After Working Inside Your Computer*.

Removing the Palmrest

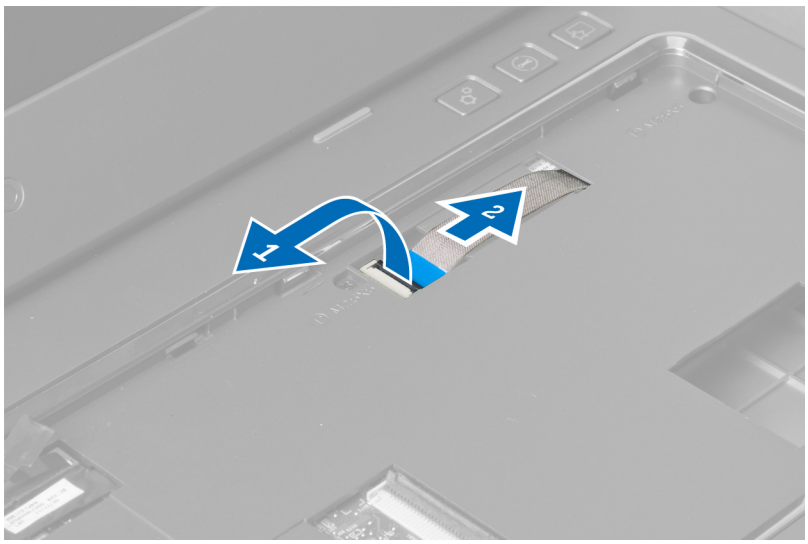
1. Follow the procedures in *Before Working On Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
3. Remove the screws from the bottom of the computer.

4. Turn the computer over towards the front. Release the latch and disconnect the power-button cable.

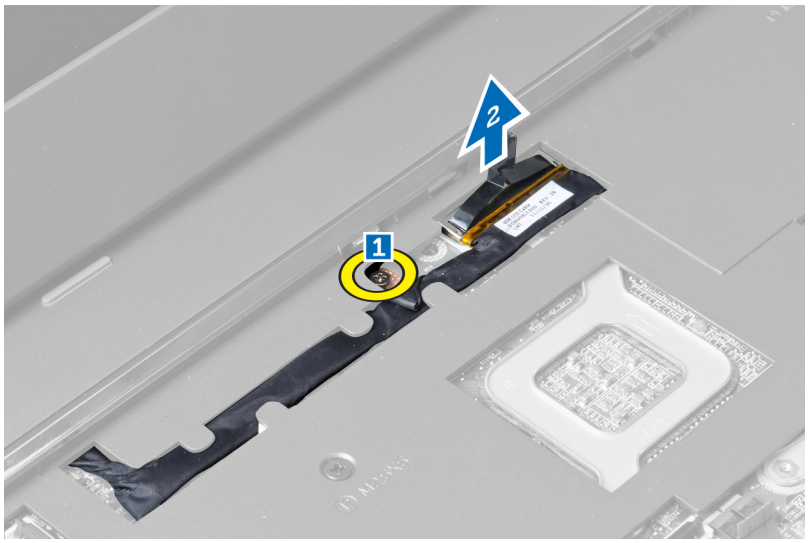
5. Release the latch and disconnect fingerprint and touchpad cables.



6. Release the latch and disconnect the hotkey cable.



7. Loosen the screw and disconnect the LVDS cable from the system board.



8. Unthread and remove the LVDS cable.

9. Remove the screws from the front of the computer.

10. Use a screwdriver and pry the palmrest towards the display.

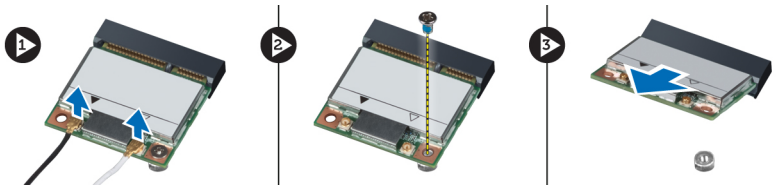
11. Slide the palmrest outwards and lift to remove from the computer.

Installing the Palmrest

1. Align the palmrest on its position on the computer.
2. Starting from the edges of the palmrest, press downwards to engage the tabs on the computer.
3. Tighten the screws to secure the palmrest to the computer.
4. Thread the LVDS cable along the notches on the palmrest. Connect the LVDS connector to the system board.
5. Tighten the screws to secure the LVDS cable to the system board.
6. Connect the hotkey cable to the system board and lock the latch.
7. Repeat step 6 for the fingerprint, touchpad and power-button cables.
8. Flip the computer and tighten the screws on the bottom of the computer to fix the palmrest.
9. Install the:
   a) keyboard
   b) hard drive
   c) optical drive
   d) memory
   e) base cover
   f) battery
10. Follow the procedures in *After Working Inside Your Computer*.

Removing the Wireless Local Area Network (WLAN) Card

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) keyboard
   d) palmrest
3. Disconnect the antenna cables connected to the WLAN card by pulling it upwards.
4. Remove the screw that secures the WLAN card, till it pops out.
5. Remove the WLAN card from the computer.

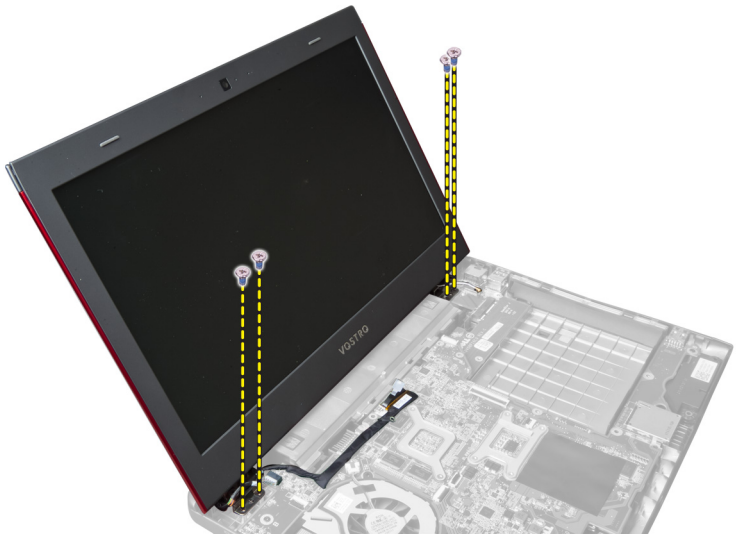


Installing the Wireless Local Area Network (WLAN) Card

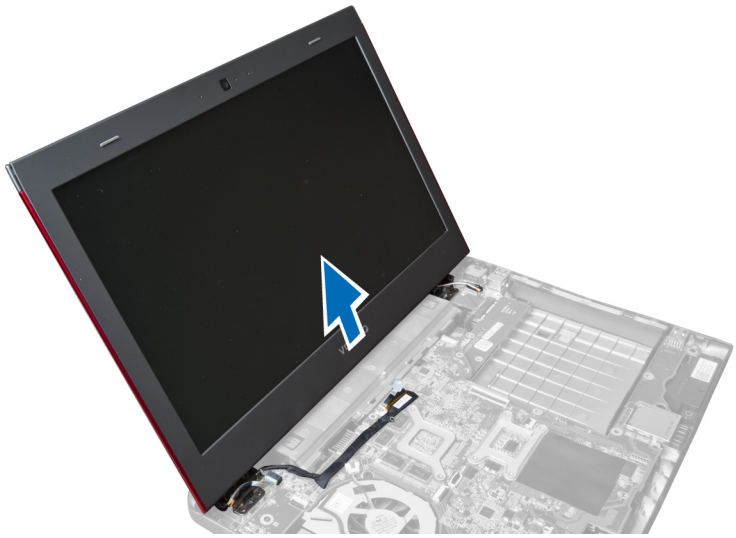
1. Slide the WLAN card into its slot.
2. Connect the antenna cables according to the color code on the WLAN card.
3. Tighten the screw to secure the WLAN card.
4. Install the:
   a) palmrest
   b) keyboard
   c) base cover
   d) battery
5. Follow the procedures in *After Working Inside Your Computer*.

Removing the Display Assembly

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) keyboard
   c) palmrest
3. Remove the screws that secure the display to the computer.



4. Lift up the display from the computer.

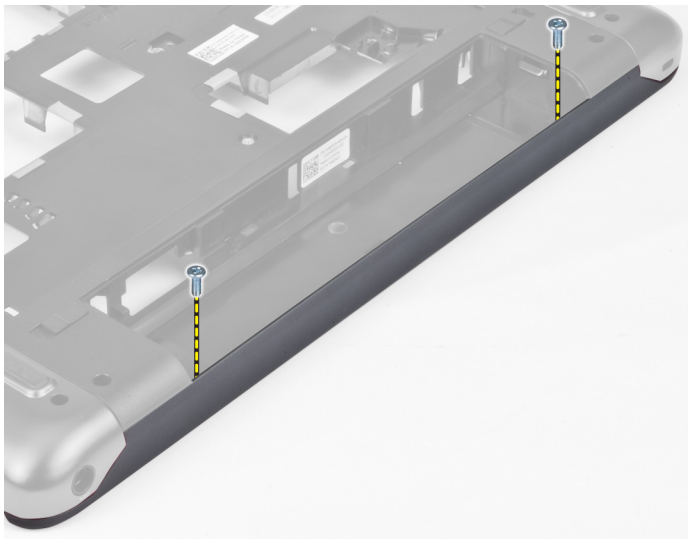


Installing the Display Assembly

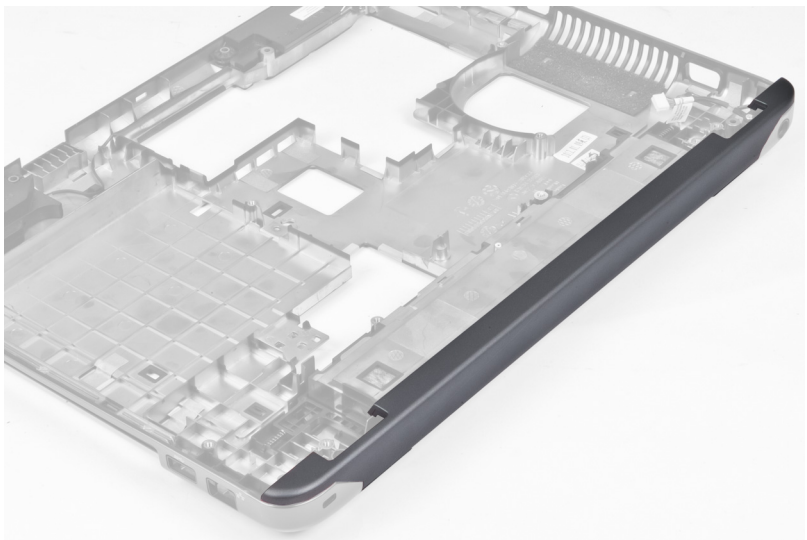
1. Align the display assembly to its location on the computer base.
2. Tighten the screws to secure the display assembly to the chassis.
3. Install the:
   a) palmrest
   b) keyboard
   c) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the Display-Hinge Cover

1. Follow the procedures in *Before Working On Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
   g) palmrest
   h) WLAN card
   i) display assembly
3. Remove the screws that secure the display-hinge cover to the computer.



4. Pry and remove the display-hinge cover from the computer.



Installing the Display-Hinge Cover

1. Press the display-hinge cover till it clicks into place.
2. Tighten the screws to secure the display-hinge cover to the computer.
3. Install the:
   a) display assembly
   b) WLAN card
   c) palmrest
   d) keyboard
   e) hard drive
   f) optical drive
   g) memory
   h) base cover
   i) battery

4. Follow the procedures in *After Working Inside Your Computer*.

Removing the Display Bezel

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) keyboard
   c) palmrest
   d) display-hinge cover
   e) display assembly
3. Pry up the sides of the display bezel and separate the bezel from the display.

Installing the Display Bezel

1. Align the display bezel on the display and gently snap it into place.
2. Install the:
   a) display assembly
   b) display-hinge cover
   c) palmrest
   d) keyboard
   e) battery
3. Follow the procedures in *After Working Inside Your Computer*.

Removing the Display

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) keyboard
   c) palmrest
   d) display-hinge cover

e) display assembly

3. Remove the screws that secure the display to the display assembly.

4. Lift the display away from the display assembly.

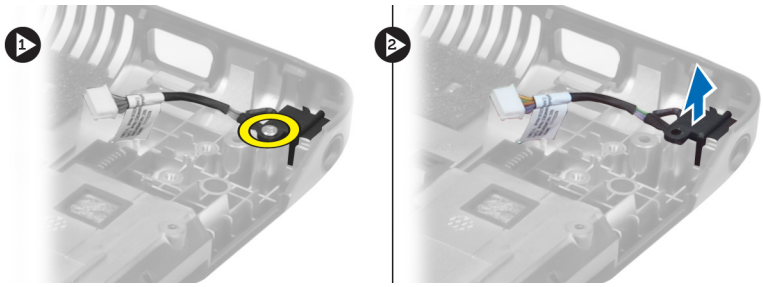
5. Peel the sticker to remove the display from the display assembly.

Installing the Display

1. Affix the sticker to the display connecting it to the display assembly.
2. Place the display to its original position on the display assembly.
3. Tighten the screws to secure the display to the display assembly.
4. Install the:
   a) display assembly
   b) display-hinge cover
   c) palmrest
   d) keyboard
   e) battery
5. Follow the procedures in *After Working Inside Your Computer*.

Removing the Power Connector

1. Follow the procedures in *Before Working On Your Computer*.
2. Remove:
   a) battery
   b) base cover
   c) keyboard
   d) palmrest
   e) WLAN card
   f) system board
   g) display assembly
   h) display-hinge cover
3. Remove the screw that secures the power connector to the computer and lift the power connector out of the computer.

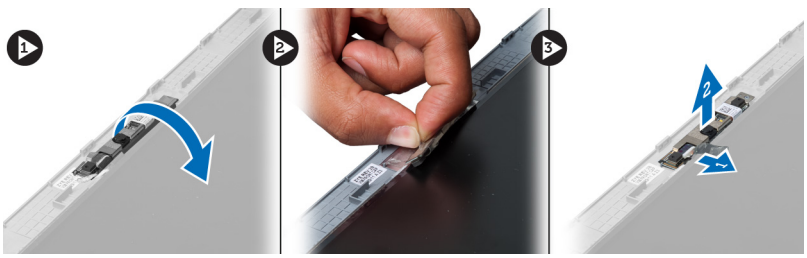


Installing the Power Connector

1. Place the power connector in its location on the base of the chassis.
2. Tighten the screw to secure the power connector.
3. Install the:
   a) display-hinge cover
   b) display assembly
   c) system board
   d) WLAN card
   e) palmrest
   f) keyboard
   g) base cover
   h) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the Camera

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) keyboard
   c) palmrest
   d) display assembly
   e) display bezel
3. Flip the camera module. Peel off the sticker covering the camera cable. Disconnect the camera cable. Lift the camera module upwards and away from the display assembly.



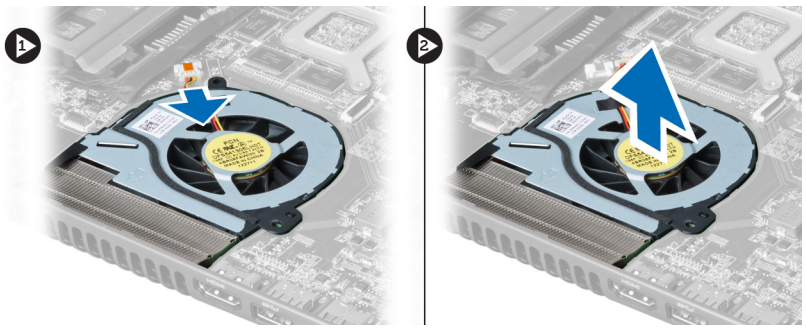
Installing the Camera

1. Connect the camera cable to the camera module.
2. Align and place the camera module to its original position on the display assembly.

3. Install the:
   a) display bezel
   b) display assembly
   c) palmrest
   d) keyboard
   e) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the Heat-Sink Fan

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
   g) palmrest
   h) WLAN card
3. Disconnect the heat-sink fan cable from the system board. Lift the fan upwards and away from the computer.

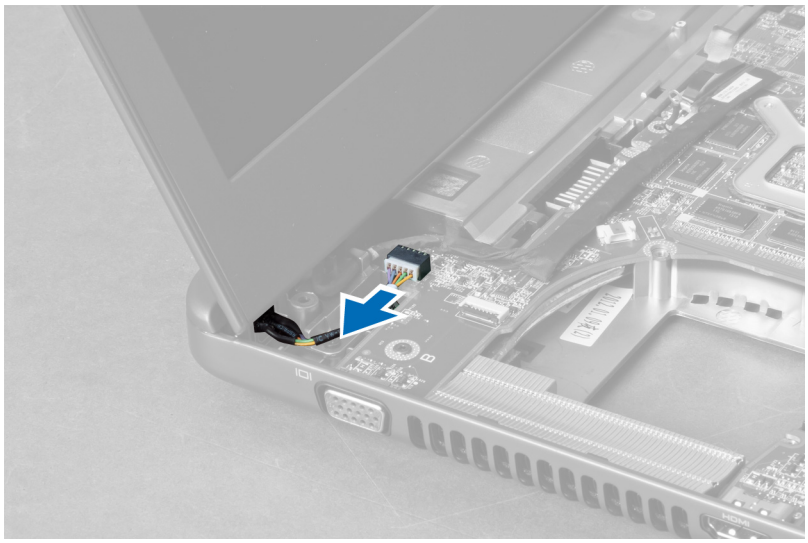


Installing the Heat-Sink Fan

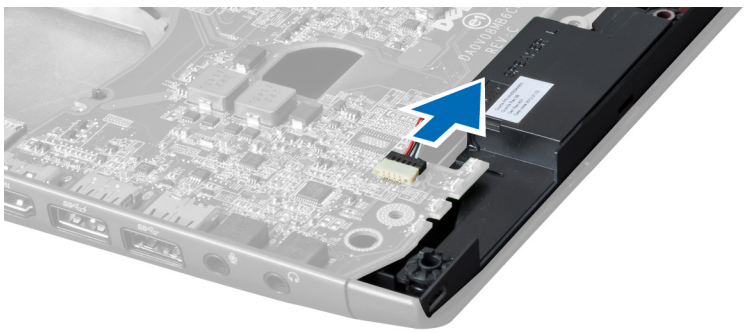
1. Place the heat-sink fan on the system board.
2. Connect the fan cable to the system board.
3. Install the:
   a) WLAN card
   b) palmrest
   c) keyboard
   d) hard drive
   e) optical drive
   f) memory
   g) base cover
   h) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the System Board

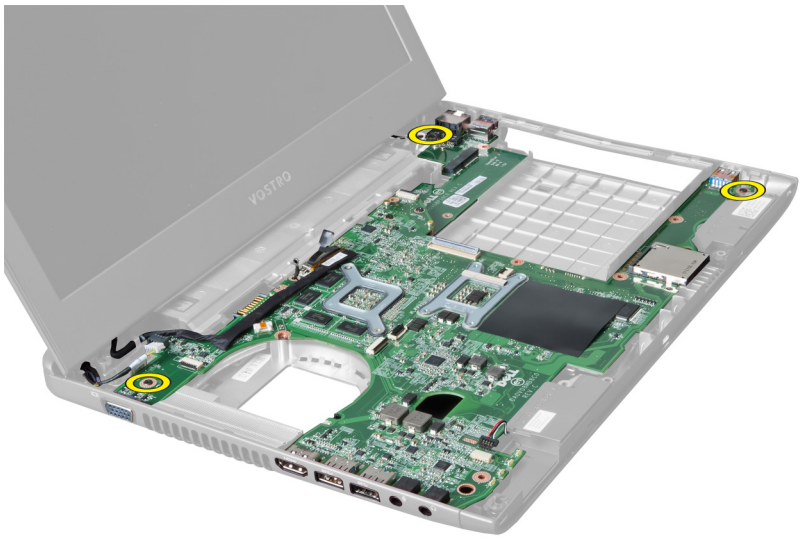
1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
   g) palmrest
   h) heat-sink fan
   i) WLAN
3. Disconnect the power cable from the system board.



4. Disconnect the speaker cable from the system board.

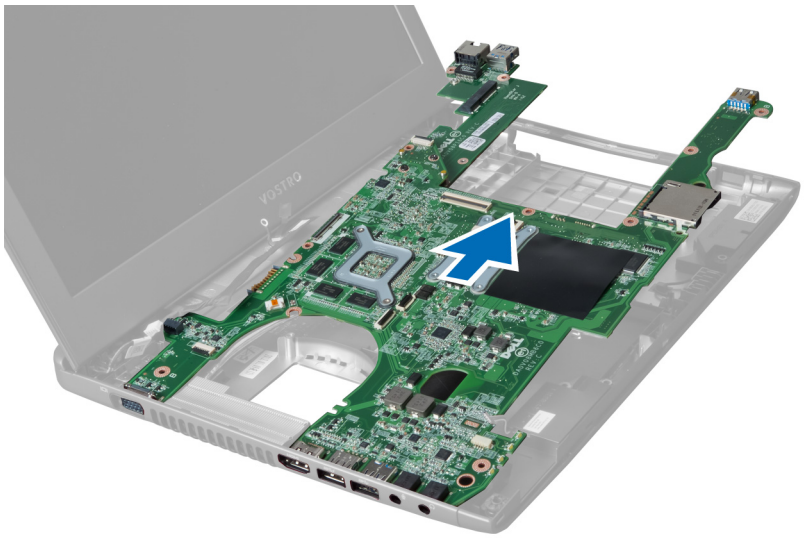


5. Remove the screws that secures the system board.



6. Lift the system board upwards.

7. Slide the system board and lift it from the chassis.



Installing the System Board

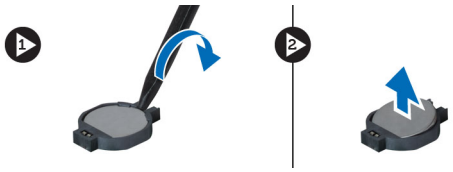
1. Align the system board to the port connectors and place the system board in the computer.
2. Tighten the screws to secure the system board to the chassis.
3. Connect the speaker cable to the system board.
4. Connect the power-connector cable to the system board.
5. Install the:
   a) WLAN card
   b) heat-sink fan
   c) palmrest
   d) keyboard
   e) hard drive
   f) optical drive
   g) memory
   h) base cover
   i) battery
6. Follow the procedures in *After Working Inside Your Computer*.

Removing the Coin-Cell Battery

1. Follow the procedures in *Before Working Inside Your Computer*
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
   g) palmrest
   h) ExpressCard reader(if available)
   i) WLAN card

j) heat sink-fan
k) system board

3. Flip the system board and locate the coin-cell battery.
4. Use a screw driver to release the coin-cell battery from the socket. The battery pops-out, lift and remove the battery from the socket.

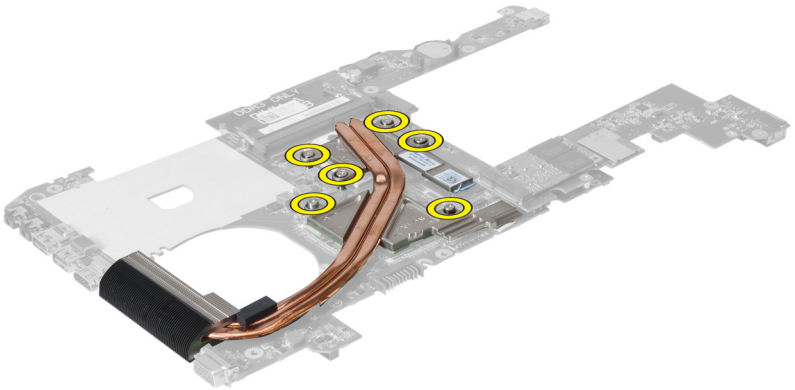


Installing the Coin-Cell Battery

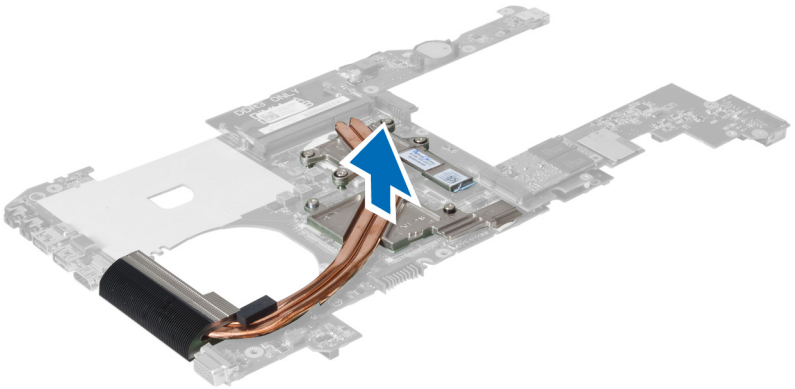
1. Insert the coin-cell battery into the slot.
2. Press on the coin-cell battery until it secures into place.
3. Install the:
   a) system board
   b) WLAN card
   c) ExpressCard reader(if available)
   d) palmrest
   e) keyboard
   f) hard drive
   g) optical drive
   h) memory
   i) base cover
   j) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the Heat Sink

1. Follow the procedures in *Before Working On Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) optical drive
   d) hard drive
   e) keyboard
   f) palmrest
   g) heat-sink fan
   h) system board
3. Flip the system board. Loosen the screws that secure the heat sink to the system board.



4. Lift and remove the heat sink from the system board.



Installing the Heat Sink

1. Place the thermal module on the system board.
2. Tighten the screws to secure the heat sink to the system board.
3. Install the:
   a) system board
   b) heat-sink fan
   c) palmrest
   d) keyboard
   e) hard drive
   f) optical drive
   g) base cover
   h) battery
4. Follow the procedures in *After Working Inside Your Computer*.

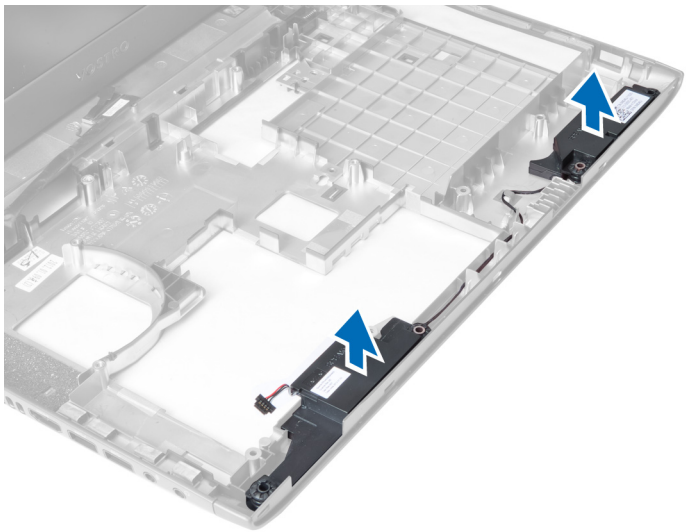
Removing the Speakers

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover

c) memory
d) optical drive
e) hard drive
f) keyboard
g) palmrest
h) WLAN card
i) heat-sink fan
j) system board

NOTE: You do not need to remove the system board to remove the speaker, however you must disconnect the speaker cable from the system board.

3. Lift the left and right speakers from the computer.



Installing the Speakers

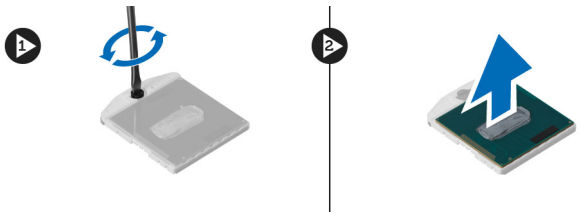
1. Place the left and right speakers on the chassis.
2. Install the:
   a) system board
   b) heat-sink fan
   c) WLAN card
   d) palmrest
   e) keyboard
   f) hard drive
   g) optical drive
   h) memory
   i) base cover
   j) battery
3. Follow the procedures in *After Working Inside Your Computer*.

Removing the Processor

1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:

a) battery
b) base cover
c) memory
d) optical drive
e) hard drive
f) keyboard
g) palmrest
h) WLAN card
i) ExpressCard reader(if available)
j) heat sink-fan
k) system board
l) heat sink

3. Remove the screw. Remove the processor cover and lift the processor from the socket. Place it in an antistatic package.



Installing the Processor

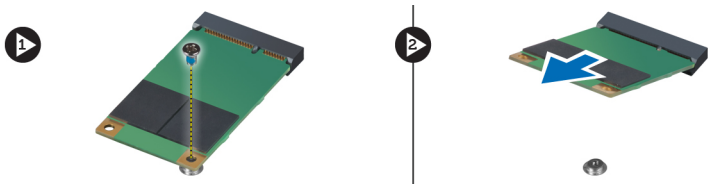
1. Insert the processor into the processor socket. Ensure the processor is properly seated. Replace the processor cover.
2. Tighten the screw to secure the processor to the system board.
3. Install the:
   a) heat sink
   b) system board
   c) ExpressCard reader(if available)
   d) WLAN card
   e) palmrest
   f) keyboard
   g) hard drive
   h) optical drive
   i) memory
   j) base cover
   k) battery
4. Follow the procedures in *After Working Inside Your Computer*.

Removing the mini-SATA Card

1. Follow the procedures in *Before Working On Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive

e) hard drive
f) keyboard
g) palmrest
h) WLAN card

3. Remove the screw that secures the mini-SATA card to the system board. Slide the card from its connector on the system board.

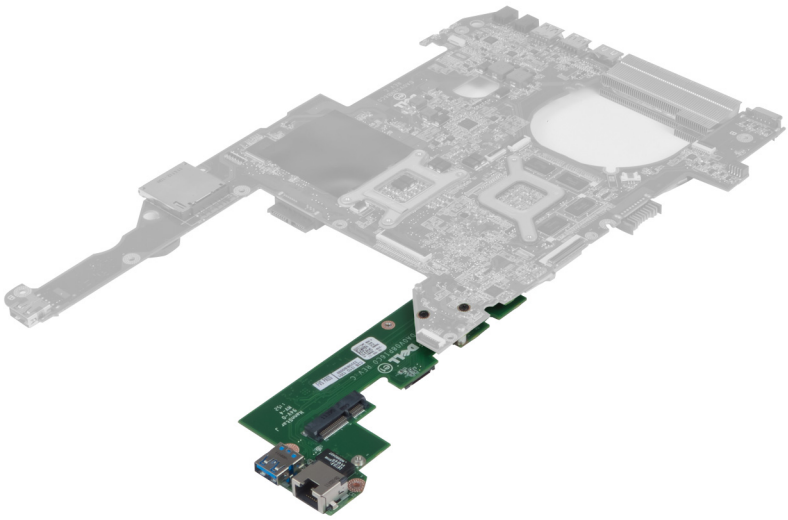


Installing the mini-SATA Card

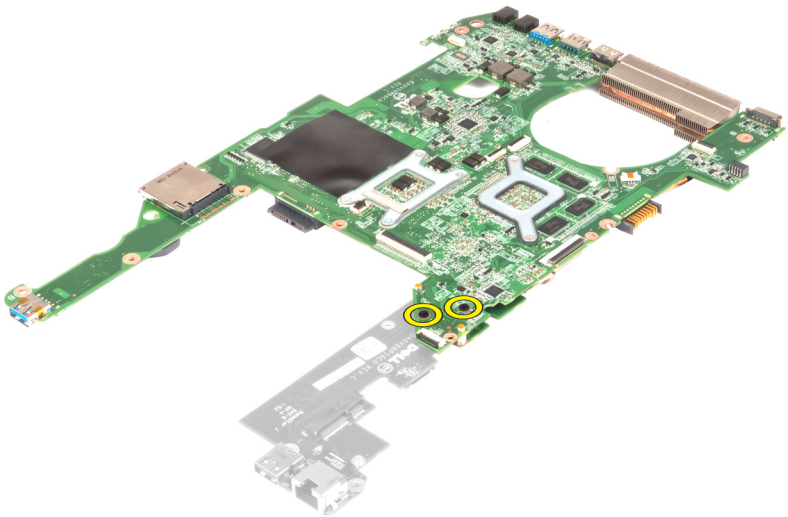
1. Place the card into the mini-SATA slot.
2. Tighten the screw to secure the mini-SATA card to the computer.
3. Install the:
   a) WLAN card
   b) palmrest
   c) keyboard
   d) hard drive
   e) optical drive
   f) memory
   g) base cover
   h) battery
4. Follow the procedures in *After Working Inside Your Computer*

Removing the USB Daughter Board

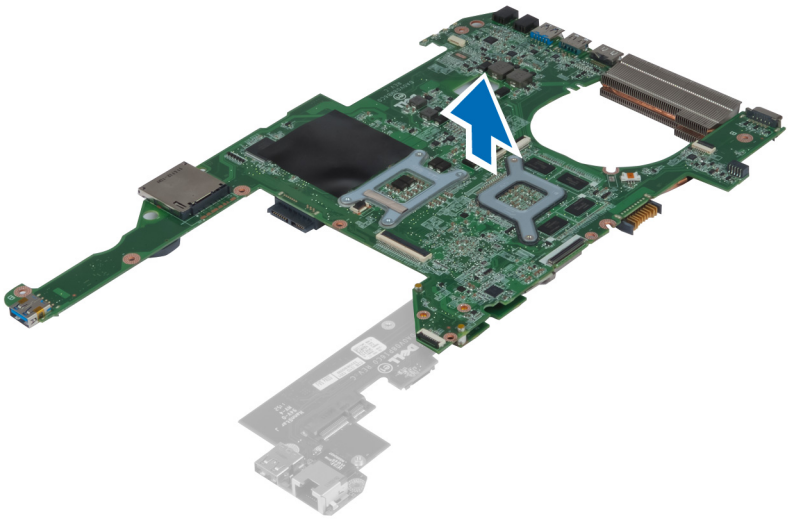
1. Follow the procedures in *Before Working Inside Your Computer*.
2. Remove the:
   a) battery
   b) base cover
   c) memory
   d) optical drive
   e) hard drive
   f) keyboard
   g) palmrest
   h) WLAN card
   i) system board
   j) mini-SATA
   k) coin-cell battery
   l) heat sink
   m) processor
3. Flip the system board with the processor slot facing down.



4. Remove the screws that secure the daughter board to the system board.



5. Lift and remove the system board to access the daughter board.



Installing the USB Daughter Board

1. Place the daughter board on the system board and tighten the screw to secure it.
2. Install the:
   a) processor
   b) heat sink
   c) coin-cell battery
   d) mini-SATA
   e) system board
   f) WLAN card
   g) palmrest
   h) keyboard
   i) hard drive
   j) optical drive
   k) memory
   l) base cover
   m) battery
3. Follow the procedures in *After Working Inside Your Computer*.

3

System Setup

System Setup enables you to manage your computer hardware and specify BIOS-level options. From the System Setup, you can:

- Change the NVRAM settings after you add or remove hardware
- View the system hardware configuration
- Enable or disable integrated devices
- Set performance and power management thresholds
- Manage your computer security

Boot Sequence

Boot Sequence allows you to bypass the System Setup-defined boot device order and boot directly to a specific device (for example: optical drive or hard drive). During the Power-on Self Test (POST), when the Dell logo appears, you can:

- Access System Setup by pressing <F2> key
- Bring up the one-time boot menu by pressing <F12> key

The one-time boot menu displays the devices that you can boot from including the diagnostic option. The boot-menu options are:

- Removable Drive (if available)
- STXXXX Drive

  NOTE: XXX denotes the SATA drive number.
- Optical Drive
- Diagnostics

  NOTE: Choosing Diagnostics, will display the **ePSA diagnostics** screen.

The boot sequence screen also displays the option to access the System Setup screen.

Navigation Keys

The following table displays the system setup navigation keys.

NOTE: For most of the system setup options, changes that you make are recorded but do not take effect until you restart the system.

Table 1. Navigation Keys

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.

Keys	Navigation
<Enter>	Allows you to select a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
<Tab>	Moves to the next focus area.
	NOTE: For the standard graphics browser only.
<Esc>	Moves to the previous page till you view the main screen. Pressing <Esc> in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.
<F1>	Displays the System Setup help file.

System Setup Options

NOTE: The system setup options may vary depending on the computer model.

The Main tab lists out the primary hardware features of the computer. The table below defines the function of each option.

Table 2. Main Options

Main	
System Information	Displays the computer model number.
System Time	Allows you to reset the time on the computer's internal clock.
System Date	Allows you to reset the date on the computer's internal calendar.
BIOS Version	Displays the BIOS revision.
Product Name	Displays the product name and the model number.
Service Tag	Displays the service tag of your computer.
Asset Tag	Displays the asset tag of your computer (if available).
CPU Type	Displays the type of processor.
CPU Speed	Displays the speed of the processor.
CPU ID	Displays the processor ID.
CPU Cache	
L1 Cache	Displays the processor L1 cache size.

Main		
	L2 Cache	Displays the processor L2 cache size.
	L3 Cache	Displays the processor L3 cache size.
Fixed HDD		Displays the model number and capacity of the hard drive.
SATA ODD		Displays the model number and capacity of the optical drive.
mSata Device		Displays the model number and capacity of the mini-Sata device.
AC Adapter Type		Displays the type of the AC adapter.
Extended Memory		Displays the memory installed on the computer.
System Memory		Displays the memory in-built on the computer.
Memory Speed		Displays the memory speed.
Keyboard Type		Displays the type of keyboard.

The Advanced tab allows you to set various functions that affect the performance of the computer. The table below defines the function of each option and its default value.

Table 3. Advanced Options

Advanced		
Intel SpeedStep	Enable or disable the Intel SpeedStep feature.	Default: Enabled
Virtualization	Enable or disable the Intel Virtualization feature.	Default: Enabled
Integrated NIC	Enable or disable the power supply to the on–board network card.	Default: Enabled
USB Emulation	Enable or disable the USB emulation feature.	Default: Enabled
USB Wake Support	Allows USB devices to wake-up the computer from standby. This feature is enabled only when the AC adapter is connected.	Default: Disabled

Advanced			
SATA Operation		Change the SATA controller mode to either ATA or AHCI.	Default: AHCI
Adapter Warnings		Enables or disables adapter warnings.	Default: Enabled
Function Key Behavior		Specifies the behavior of the function key <Fn> .	Default: Function key first
Charger Behavior		Specifies if the computer battery will be charged when connected to an AC power source.	Default: Enabled
Battery Health		Specifies the health of the battery.	
Intel Rapid Start Technology		Allows you to configure the Intel rapid start technology	
Miscellaneous Devices		These fields let you enable or disable various on-board devices.	
	External USB Ports	Enables or disables external USB ports.	Default: Enabled
	Microphone	Enables or disables microphone.	Default: Enabled
	Camera	Enables or disables camera.	Default: Enabled
	Media Card Reader	Enables or disables media card reader.	Default: Enabled
	Optical Drive	Enables or disables optical drive.	Default: Enabled
	Fingerprint Reader	Enables or disables fingerprint reader.	Default: Enabled
	Boot Disable	Enables or disables boot.	Default: Disabled
	USB debug	Enables or disables USB debug.	Default: Disabled
	Internal Bluetooth	Enables or disables internal bluetooth.	Default: Enabled
	Internal WLAN	Enables or disables WLAN.	Default: Enabled
	Internal WWAN	Enables or disables WWAN.	Default: Enabled

The Security tab displays the security status and allows you to manage the security features of the computer.

Table 4. Security Options

Security	
Set Service Tag	This field displays your system's service tag. If the service tag is not already set, this field can be used to enter it.
Admin Password	This field displays if a admin password is set for this computer or not (Default: Cleared/Not installed)
System Password	This field displays if a system password is set for this computer or not (Default: Cleared/Not installed)
Hdd Password State	This field displays if a HDD password is set for this computer or not (Default: Cleared)
Set Supervisor Password	Allows you to change or delete the administrator password.
Set HDD Password	Allows you to set a password on the computer's internal hard drive (HDD).
Password Change	Allows you to add/remove permission for changing passwords.
Password Bypass	Allows you to bypass the system password and the internal HDD password prompts during a system restart/ resume from hibernate state. (Default: Disabled)
Computrace	Enable or disable the Computrace feature on your computer.

The Boot tab allows you to change the boot sequence.

Table 5. Boot Options

Boot	
Boot Priority Order	Specifies the order of different devices in which the computer will boot through at start up.
Removable Drive	Specifies the removable drive the computer can boot through.
Hard Disk Drives	Specifies which hard drive the computer can boot through.
USB Storage Device	Specifies which USB storage device the computer can boot through.
CD/DVD/CD-RW Drive	Specifies which CD/DVD the computer can boot through.
Network	Specifies which network device the computer can boot through.

Exit — This section allows you to save, discard, and load default settings before exiting from System Setup.

Updating the BIOS

It is recommended to update your BIOS (system setup), on replacing the system board or if an update is available. For notebooks, ensure that your computer battery is fully charged and connected to a power outlet

1. Restart the computer.
2. Go to **support.dell.com/support/downloads**.
3. If you have your computer's Service Tag or Express Service Code:

   NOTE: For desktops, the service tag label is available on the front of your computer.

   NOTE: For notebooks, the service tag label is available on the bottom of your computer.

   a) Enter the **Service Tag** or **Express Service Code** and click **Submit**.
   b) Click **Submit** and proceed to step 5.
4. If you do not have your computer's service tag or express service code, select one of the following:
   a) **Automatically detect my Service Tag for me**
   b) **Choose from My Products and Services List**
   c) **Choose from a list of all Dell products**
5. On the application and drivers screen, under the **Operating System** drop-down list, select **BIOS**.
6. Identify the latest BIOS file and click **Download File**.
7. Select your preferred download method in the **Please select your download method below window**; click **Download Now**.

   The **File Download** window appears.
8. Click **Save** to save the file on your computer.
9. Click **Run** to install the updated BIOS settings on your computer.

   Follow the instructions on the screen.

System and Setup Password

You can create a system password and a setup password to secure your computer.

Password Type	Description
System password	Password that you must enter to log on to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

CAUTION: The password features provide a basic level of security for the data on your computer.

CAUTION: Anyone can access the data stored on your computer if is not locked and left unattended.

NOTE: Your computer is shipped with the system and setup password feature disabled.

Assigning a System Password and Setup Password

You can assign a new **System Password** and/or **Setup Password** or change an existing **System Password** and/or **Setup Password** only when **Password Status** is **Unlocked**. If the Password Status is **Locked**, you cannot change the System Password.

NOTE: If the password jumper is disabled, the existing System Password and Setup Password is deleted and you need not provide the system password to log on to the computer.

To enter a system setup, press <F2> immediately after a power-on or reboot.

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press <Enter>.
   The **System Security** screen appears.
2. In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3. Select **System Password** , enter your system password, and press <Enter> or <Tab>.
   Use the following guidelines to assign the system password:
   - A password can have up to 32 characters.
   - The password can contain the numbers 0 through 9.
   - Only lower case letters are valid, upper case letters are not allowed.
   - Only the following special characters are allowed: space, ("), (+), (,), (-), (.), (/), (;), ([), (\), (]), (`).

   Re-enter the system password when prompted.
4. Type the system password that you entered earlier and click **OK**.
5. Select **Setup Password**, type your system password and press <Enter> or <Tab>.
   A message prompts you to re-type the setup password.
6. Type the setup password that you entered earlier and click **OK**.
7. Press <Esc> and a message prompts you to save the changes.
8. Press <Y> to save the changes.
   The computer reboots.

Deleting or Changing an Existing System and/or Setup Password

Ensure that the **Password Status** is Unlocked (in the System Setup) before attempting to delete or change the existing System and/or Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.

To enter the System Setup, press <F2> immediately after a power-on or reboot.

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press <Enter>.
   The **System Security** screen is displayed.
2. In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3. Select **System Password**, alter or delete the existing system password and press <Enter> or <Tab>.
4. Select **Setup Password**, alter or delete the existing setup password and press <Enter> or <Tab>.

   NOTE: If you change the System and/or Setup password, re-enter the new password when promoted. If you delete the System and/or Setup password, confirm the deletion when promoted.
5. Press <Esc> and a message prompts you to save the changes.
6. Press <Y> to save the changes and exit from the System Setup.
   The computer reboots.

4

Diagnostics

If you experience a problem with your computer, run the ePSA diagnostics before contacting Dell for technical assistance. The purpose of running diagnostics is to test your computer's hardware without requiring additional equipment or risking data loss. If you are unable to fix the problem yourself, service and support personnel can use the diagnostics results to help you solve the problem.

Enhanced Pre-Boot System Assessment (ePSA) Diagnostics

The ePSA diagnostics (also known as system diagnostics) performs a complete check of your hardware. The ePSA is embedded with the BIOS and is launched by the BIOS internally. The embedded system diagnostics provides a set of options for particular devices or device groups allowing you to:

- Run tests automatically or in an interactive mode
- Repeat tests
- Display or save test results
- Run thorough tests to introduce additional test options to provide extra information about the failed device(s)
- View status messages that inform you if tests are completed successfully
- View error messages that inform you of problems encountered during testing

CAUTION: Use the system diagnostics to test only your computer. Using this program with other computers may cause invalid results or error messages.

NOTE: Some tests for specific devices require user interaction. Always ensure that you are present at the computer terminal when the diagnostic tests are performed.

1. Power-on the computer.
2. As the computer boots, press the <F12> key as the Dell logo appears.
3. On the boot menu screen, select the **Diagnostics** option.
   The **Enhanced Pre-boot System Assessment** window is displayed, listing all devices detected in the computer. The diagnostics starts running the tests on all the detected devices.
4. If you wish to run a diagnostic test on a specific device, press <Esc> and click **Yes** to stop the diagnostic test.
5. Select the device from the left pane and click **Run Tests**.
6. If there are any issues, error codes are displayed.
   Note the error code and contact Dell.

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Troubleshooting Your Computer

You can troubleshoot your computer using indicators like Diagnostic Lights, Beep Codes, and Error Messages during the operation of the computer.

Device Status Lights

Table 6. Device Status Lights

	Turns on when you turn on the computer and blinks when the computer is in a power management mode.
	Turns on when the computer reads or writes data.
	Turns on steadily or blinks to indicate battery charge status.
	Turns on when wireless networking is enabled.

Battery Status Lights

If the computer is connected to an electrical outlet, the battery light operates as follows:

Alternately blinking amber light and white light	An unauthenticated or unsupported non-Dell AC adapter is attached to your laptop.
Alternately blinking amber light with steady white light	Temporary battery failure with AC adapter present.
Constantly blinking amber light	Fatal battery failure with AC adapter present.
Light off	Battery in full charge mode with AC adapter present.
White light on	Battery in charge mode with AC adapter present.

Diagnostic Beep Codes

The following table shows the possible beep codes that may be emitted by the computer when your computer is unable to complete a power on self test.

Table 7. Diagnostic Beep Codes

Beep	Description	Possible Cause/Troubleshooting Steps
1	BIOS ROM checksum in progress of failure.	System board failure, covers BIOS corruption or ROM error
2	No RAM detected	If no memory is detected, you can perform the following steps: • reseat the memory if an additional memory is available • install that memory if the issue persists • issue with the memory connector
3	• Chipset Error (North and South Bridge Chipset, DMA/IMR/Timer Error) • Time-Of-Day Clock test failure • Gate A20 failure • Super I/O chip failure • Keyboard controller test failure	System board failure
4	RAM Read/Write failure	If no memory is detected, you can perform the following steps: • reseat the memory if an additional memory is available • install that memory if the issue persists • issue with the memory connector
5	Real-time clock power fail	CMOS battery failure. Reseat the battery. If issue persists, there can be an issue with the coin-cell battery or the connector (that will involve replacing the system board)
6	Video BIOS Test Failure	Video card failure
7	Processor Failure	Processor failure
8	Display	Display failure

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Specifications

NOTE: Offerings may vary by region. For more information regarding the configuration of your computer, click Start **(Start icon) → Help and Support**, and then select the option to view information about your computer.

Table 8. System Information

Feature	Description
Chipset	Intel HM77 Express Chipset
DRAM bus width	64-bit
Flash EPROM:	
Vostro 3360 / Vostro 3460	SPI 8 MB
Vostro 3560	SPI 6 MB

Table 9. Processor

Feature	Description
Types	• Intel Core i3 series • Intel Core i5 series • Intel Core i7 series
L3 cache	up to 6 MB

Table 10. Memory

Feature	Description
Memory connector	two SODIMM slots
Memory capacity	2 GB, 4 GB, 6 GB, or 8 GB
Memory type	DDR3 SDRAM (1333 MHz and 1600 MHz)
Minimum memory	2 GB
Maximum memory	8 GB

Table 11. Audio

Feature	Description
Type	2 channel high definition audio
Controller:	
Vostro 3360	Cirrus Logic CS4213D

Feature	Description
Vostro 3460 / Vostro 3560	Conexant CX20672-21Z
Stereo conversion	24-bit (analog-to-digital and digital-to-analog)
Interface:	
Internal	high definition audio
External	microphone-in/stereo headphones/external speakers connector
Speakers	2 W
Volume controls	keyboard function keys and program menus

Table 12. Video

Feature	Description
Video type	• integrated on system board • discrete
Data bus:	
UMA	integrated video
Discrete:	
Vostro 3460	• PCI-E x16 Gen1 • PCI-E x16 Gen2
Vostro 3560	PCI-E x8 Gen 2
Video controller:	
UMA	• Intel HD Graphics 3000 • Intel HD Graphics 4000
Discrete:	
Vostro 3460	nVidia GeForce GT 630M
Vostro 3560	AMD Radeon HD7670M

Table 13. Camera

Feature	Description
Camera Resolution	HD 720P
Video Resolution (maximum)	1280 x 720 pixels at 30 FPS

Table 14. Communication

Feature	Description
Network adapter	10/100/1000 Mbps Ethernet LAN
Wireless	• internal WLAN

Feature	Description
	• Bluetooth • WWAN (optional)

Table 15. Ports and Connectors

Feature	Description
Audio:	
Vostro 3360	one stereo headphone/headset/audio-out connector
Vostro 3460 / 3560	one microphone connector, one headphone connector
Video	• one 15-pin VGA connector • one 19-pin HDMI connector
Network adapter	one RJ-45 connector
USB 3.0:	
Vostro 3360	three
Vostro 3460 / Vostro 3560	four

NOTE: The powered USB 3.0 connector also supports Microsoft Kernel Debugging. The ports are identified in the documentation shipped with your computer.

Media card reader	one 8-in-1

Table 16. Display

Feature	Description		
Type	HD WLED AG		
Size:			
Vostro 3360	13.0 inches		
Vostro 3460	14.0 inches		
Vostro 3530	15.0 inches		
Dimensions:	Vostro 3360	Vostro 3460	Vostro 3560
Height	240 mm (9.44 inches)	245 mm (9.64 inches)	259 mm (10.19 inches)
Width	330 mm (12.99 inches)	340 mm (13.38 inches)	375 mm (14.76 inches)
Diagonal	330 mm (13 inches)	355.60 mm (14 inches)	381 mm (15 inches)
Active area (X/Y)	330 mm x 240 mm	340 mm x 245 mm	375 mm x 259 mm
Maximum resolution:			
Vostro 3360/3460	1366 x 768 pixels at 262K colors		
Vostro 3560	1920 x 1080 FHD		

Feature	Description
Maximum Brightness	200 nits
Operating angle	0° (closed) to 140°
Refresh rate	60 Hz
Minimum Viewing angles:	
Horizontal	40°/40°
Vertical	15°/30° (H/L)
Pixel pitch	0.23 mm x 0.23 mm

Table 17. Keyboard

Feature	Description
Number of keys:	
Vostro 3360	United States and Canada: 80 keys, Europe and Brazil: 81 keys, Japan: 84 keys
Vostro 3460/3560	United States and Canada: 86 keys, Europe and Brazil: 87 keys, Japan: 90 keys

Table 18. Touchpad

Feature	Description	
Active Area:	Vostro 3360	Vostro 3460/3560
X-axis	82.00 mm (3.22 inches)	90.00 mm (3.54 inches)
Y-axis	45.00 mm (1.77 inches)	49.00 mm (1.93 inches)

Table 19. Battery

Feature	Description		
Type:			
Vostro 3360	4-cell/8–cell lithium ion (3.4 Ahr/cell or 49 Whr)		
Vostro 3460/3560	6-cell lithium ion (2.2 Ahr/cell or 48 Whr)		
Dimensions:	Vostro 3360	Vostro 3460	Vostro 3560
Height	20.20 mm (0.80 inch)	20 mm (0.79 inch)	20 mm (0.79 inch)
Width	208.36 mm (8.20 inches)	208 mm (8.19 inches)	208 mm (8.19 inches)
Depth	56.52 mm (2.22 inches)	51 mm (2.00 inches)	51 mm (2.00 inches)
Weight	4–cell: 0.28 kg (0.61 lb) 8–cell: 0.30 kg (0.66 lb)	0.33 kg (0.73 lb)	0.33 kg (0.73 lb)
Charge time	approximately 4 hours (when the computer is turned off)		
Voltage:			

Feature	Description
Vostro 3360	14.8 VDC
Vostro 3460 / Vostro 3560	11.1 VDC
Temperature range:	
Operating	0 °C to 35 °C (32 °F to 95 °F)
Non-Operating	–40 °C to 65 °C (–40 °F to 149 °F)
Coin-cell battery	3 V CR2032 lithium coin cell

Table 20. AC Adapter

Feature	Description
Type:	
Vostro 3360 / Vostro 3460 / Vostro 3560 with integrated video card	65 W
Vostro 3460 with discrete video card	90 W
Vostro 3560 with quad core	90 W
Input voltage	100 VAC to 240 VAC
Input current (maximum)	1.50 A/1.60 A/1.70 A
Input frequency	50 Hz to 60 Hz
Output power	65 W and 90 W
Output current:	
65 W	3.34 A (continuous)
90 W	4.62 A
Rated output voltage	19.50 VDC (+/– 1.0 VDC)
Dimensions:	
Height	28.20 mm (1.11 inches)
Width	57.90 mm (2.28 inches)
Depth	137.16 mm (5.40 inches)
Temperature range:	
Operating	0 °C to 35 °C (32 °F to 95 °F)
Non-Operating	–40 °C to 70 °C (–40 °F to 158 °F)

Table 21. Physical

Feature	Description		
	Vostro 3360	Vostro 3460	Vostro 3560
Height	19.20 mm (0.75 inch)	30.10 mm (1.18 inches)	32.50 mm (1.27 inches)
Width	332.00 mm (13.07 inches)	345.50 mm (13.60 inches)	375.00 mm (14.76 inches)
Depth	232.50 mm (9.15 inches)	244.00 mm (9.60 inches)	259.00 mm (10.19 inches)
Weight (with battery pack)	1.66 kg (3.65 lb)	2.23 kg (4.91 lb)	2.57 kg (5.66 lb)

Table 22. Environmental

Feature	Description
Temperature:	
Operating	0 °C to 35 °C (32 °F to 95 °F)
Storage	–40 °C to 65 °C (–40 °F to 149 °F)
Relative humidity (maximum):	
Operating	10 % to 90 % (noncondensing)
Storage	5 % to 95 % (noncondensing)
Altitude (maximum):	
Operating	–16 m to 3048 m (–50 to 10,000 ft) **NOTE:** For altitudes above 2950 feet, the maximum operating temperature is derated 1°F/550 ft.
Non-Operating	–15.2 m to 10,668 m (–50 ft to 35,000 ft)
Airborne contaminant level	G1 as defined by ISA-71.04–1985

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Contacting Dell

To contact Dell for sales, technical support, or customer service issues:

1. Visit support.dell.com.
2. Verify your country or region in the **Choose a Country/Region** drop-down menu at the bottom of the page.
3. Click **Contact Us** on the left side of the page.
4. Select the appropriate service or support link based on your need.
5. Choose the method of contacting Dell that is convenient for you.